

## ABSTRACT

The present invention relates to a polygonal barrel sputtering device and a polygonal barrel sputtering method for coating surfaces of fine particles with  
5 ultra-fine particles having a grain diameter smaller than the particles or thin films, a coated fine particle formed by the device and method, a micro capsule and a method for producing the micro capsule. The polygonal barrel sputtering method according to the present  
10 invention comprises a step for containing fine particles 3 in a vacuum container 1 having a polygonal internal shape on a cross section, which is substantially parallel with a gravitational direction, and a step for performing sputtering while stirring or rolling the fine  
15 particles 3 contained in the vacuum container 1 by rotating the vacuum container 1 about a rotating axis, which is substantially perpendicular to the cross section, whereby surface of the fine particle 3 is coated with ultra-fine particles having a grain diameter  
20 smaller than the fine particle or thin films.